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Paper 12

Entered: December 16, 2015

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PIXART IMAGING, INC.,
Petitioner,

v.

SYNCPOINT IMAGING, LLC,
Patent Owner.

Case IPR2015-01347
Patent 6,275,214 B1

Before TRENTON A. WARD, STACEY G. WHITE, and
CHRISTA P. ZADO, *Administrative Patent Judges*.

ZADO, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

A. Background

PixArt Imaging, Inc. (“Petitioner”) filed a Petition seeking to institute an *inter partes* review of claims 1–11, 17–21, and 24–26 (“the challenged claims”) of U.S. Patent No. 6,275,214 B1 (Ex. 1001, “the ’214 patent”) pursuant to 35 U.S.C. §§ 311–319. Paper 1 (“Pet.”). SyncPoint Imaging, LLC (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”).¹ We have statutory authority under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

Upon consideration of the Petition, Patent Owner’s Preliminary Response, and the associated evidence, we conclude Petitioner has established a reasonable likelihood it would prevail with respect to at least one of the challenged claims. Accordingly, for the reasons that follow, we institute an *inter partes* review of claims 1–10, 17–19, and 24–26. Our factual findings and conclusions at this stage of the proceeding are based on the evidentiary record developed thus far. This is not a final decision as to patentability of claims for which *inter partes* review is instituted. Our final decision will be based on the record as fully developed during trial.

B. Additional Proceedings

The parties inform us that the ’214 patent has been asserted against Petitioner in *SyncPoint Imaging, LLC v. Nintendo of America, Inc.*, No. 2:15-cv-247 (E.D. Tex.). Pet. 2; Paper 7, 1.

¹ We authorized Petitioner to file a Reply (Paper 10, 2), which Petitioner filed on Oct. 23, 2015 (Paper 11).

Petitioner informs us the '214 patent is the subject of an *ex parte* reexamination, Reexamination Control No. 90/020,085, which was ordered June 23, 2015. Paper 9, 2.

C. The '214 Patent

The '214 patent is titled "Computer Presentation System and Method with Optical Tracking of Wireless Pointer," and generally relates to a method or apparatus for remotely controlling a computer using an external cursor on a projected display screen associated with the computer. Ex. 1001, Abstract. Figure 1 of the patent is reproduced below:

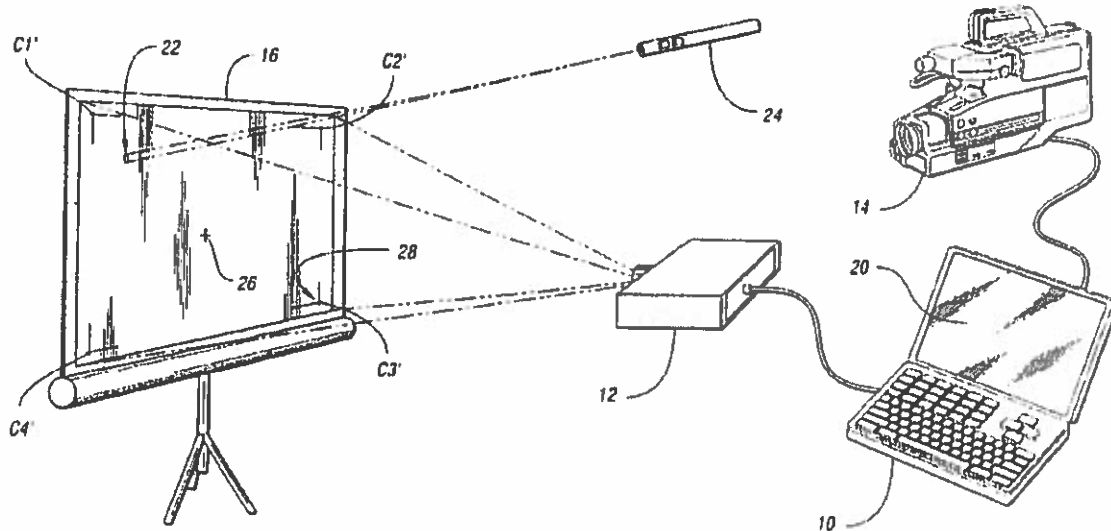


Fig. 1

Figure 1 depicts laptop computer 10 connected to video projector 12, which projects image 16 from computer screen 20 onto screen 18. Ex. 1001, 3:5–9, 15–18. "Preferably, screen 18 is . . . a substantially planar surface remotely located from computer 10." *Id.* at 3:9–11. In one embodiment, an external cursor 22 is generated by pointing hand-held optical pointer 24 at screen 18, thereby superimposing external cursor 22 on to image 16. *Id.* at 3:22–31. The '214 patent provides that "[a]s used in this application, an external

cursor is one which is generated externally relative to computer 10, i.e., generated by some other device which would include another computer, projector, or the like.” *Id.* at 3:24–28. Camera 14 captures image 16 generated by projector 12, and computer 10 processes the captured image to determine the position of external cursor 22 and at least one other property of external cursor 22. *Id.* at 3:41–62. In an embodiment, the at least one property may include intensity, color, shape, size, or a particular pattern of movement. *Id.* at 8:36–40. The detected position, in addition to the other detected property, is used to generate position-dependent commands to control computer 10. *Id.* at 3:41–62, 8:43–50. “Such position or context-dependent commands may emulate a ‘left-click’ or ‘right-click’ command generated by a traditional computer pointing device, such as a mouse, track ball, touch pad, or the like.” *Id.* at 3:56–59.

D. Challenged Claims of the '214 Patent

Claims 1, 17, 19, 24, 25, and 26 are independent, and claims 2–11, 18, 20, and 21 depend directly or indirectly from one of claims 1, 17, or 19.

Claims 1 and 2 are reproduced below:

1. A method for remotely controlling a computer having an associated screen for displaying output from the computer and having an internal cursor generated by the computer, the method comprising:

detecting at least one property of an external cursor and position of the external cursor relative to the output from the computer;

generating a command to move the internal cursor to a position on the screen corresponding to the position of the external cursor; and

generating a command for the computer based on the at least one detected property of the external cursor.

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2. The method of claim 1 wherein the step of detecting comprises:

capturing an image of the screen and the external cursor with a camera; and

processing the image to detect the at least one property of the external cursor.

Ex. 1001, 9:34–52.

E. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–11, 17–21, and 24–26 of the '214 patent based on the following grounds:

Challenged Claims	Basis	References
1, 2, 4, 5, 8, 9, 17–19, 24–26	§ 102(b)	Stove ²
1–4, 6, 7, 9, 11, 17, 18, 25	§ 102(b)	Platzker ³
1, 2, 4–6, 8–10, 17–21, 24–26	§ 102(b)	Bronson ⁴
1, 2, 4, 6, 8, 9, 11, 19, 25	§ 102(b)	Elrod ⁵
1, 2, 4, 7–9, 19, 25	§ 102(b)	Vogeley ⁶

² WO 97/41502, published Nov. 6, 1997 (Ex. 1005) (“Stove”).

³ U.S. Patent No. 5,528,263, issued June 18, 1996 (Ex. 1006) (“Platzker”).

⁴ U.S. Patent No. 5,138,304, issued Aug. 11, 1992 (Ex. 1007) (“Bronson”).

⁵ European Patent Application Pub. No. 0 484 160 A2, published May 6, 1992 (Ex. 1008) (“Elrod”).

⁶ U.S. Patent No. 5,235,363, issued Aug. 10, 1993 (Ex. 1009) (“Vogeley”).

Challenged Claims	Basis	References
3	§ 103(a)	Bronson in view of the knowledge of a person of ordinary skill in the art; or Stove, Elrod, or Vogeley combined with Platzker or Bronson in view of the knowledge of a person of ordinary skill in the art
7	§ 103(a)	Stove, Bronson, or Elrod combined with Platzker or Vogeley, alone or in combination
10	§ 103(a)	Stove, Bronson, or Vogeley combined with Platzker or Elrod, alone or in combination
11	§ 103(a)	Stove, Bronson, or Vogeley combined with Platzker or Elrod, alone or in combination
20, 21	§ 103(a)	Stove, Elrod, or Vogeley combined with Bronson, alone or in combination

II. ANALYSIS

A. Real Party-In-Interest

Patent Owner requests that we vacate the filing date of the Petition on grounds that Petitioner should have identified Nintendo of America Inc. and Nintendo Co. Ltd (collectively, “Nintendo”) as real parties-in-interest.

Prelim. Resp. 2–4. Based on the current record, we are not persuaded.

A petitioner for *inter partes* review must identify all real parties-in-interest. 35 U.S.C. § 312(a)(2); *see also* 37 C.F.R. § 42.8(b)(1). The real party-in-interest may include, in addition to the named petitioner, “the party or parties at whose behest the petition has been filed.” Office Patent Trial Practice Guide (“Trial Practice Guide”), 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012). Whether a non-party is a real party-in-interest is a highly fact-

dependent question. *Id.* Although there are multiple factors relevant to the question of whether a non-party may be recognized as a real party-in-interest, a common consideration is whether the non-party exercised or could have exercised control over a party's participation in a proceeding. *Id.* Relevant factors also may include a non-party's relationship with the petitioner or the petition itself, including the nature and/or degree of involvement in the filing. *Id.* at 48,760.

Patent Owner argues Nintendo is a real party-in-interest because:

(1) the parties' joint manufacture of the CMOS chip that employs the patented technology without which infringement would not occur, (2) the immortalization of Nintendo and [Petitioner's] unity of interest in a Common Interest Agreement and [Petitioner]-Nintendo development agreements, the contents of which are under Protective Order in the Texas Action, and (3) the parties' complete unity of interest with respect to the outcome of the Texas litigation, the reexamination, this IPR proceeding, and the success of the sales of the Accused Products.

Prelim. Resp. 6–7; *see also id.* at 8–18. On these bases, Patent Owner asserts “Nintendo has exercised control over this proceeding.” *Id.* at 8.

Petitioner responds that Nintendo has no control over it with respect to this proceeding, the related district court litigation, or in their business relationship, and that Nintendo played no role in the filing of the Petition. Paper 11, 1.

Petitioner argues, in particular, that it does not jointly manufacture chips with Nintendo. *Id.* Rather, according to Petitioner, Nintendo is a customer and Petitioner is a supplier. Petitioner designs, manufactures, and sells CMOS chips to Nintendo for use in Wii game controllers. *Id.* Petitioner supports this allegation with the Declaration of its General

Counsel, Chia-Lin “Charlie” Chang. *Id.*; Ex. 1014 ¶¶ 3–4. Mr. Chang asserts Petitioner entered a series of development agreements pertaining to the CMOS devices, but the indemnification provisions in these agreements does not give Nintendo control over litigation. Pet. 2; Ex. 1014 ¶ 4.

Petitioner further argues that neither being joint defendants in patent litigation, nor the existence of a common defense agreement,⁷ without more, establishes that Nintendo is a real party-in-interest. Paper 11, 2. Petitioner alleges the only correspondence between it and Nintendo regarding this filing was to inform Nintendo that it would be filing the Petition. Pet. 3; Ex. 1013 (Declaration of Rick Chang Ex. B, privileged log entry 34). Mr. Chang asserts the common defense agreement does not establish any control of one party over the other in litigation, that Nintendo does not control Petitioner’s actions in any way with regard to this filing, and that Nintendo has not participated in, funded, provided analysis, made strategic decisions with regard to, or selected Dr. M. Ray Mercer as a declarant with regard to, this filing. Ex. 1014 ¶¶ 5–13; *see also* Paper 11, 3–5.

On this record, we are not persuaded Petitioner has failed to name all real parties-in-interest. Patent Owner has not presented sufficient evidence to persuade us that Nintendo exercised, or could have exercised, control over the filing of the Petition, or that Nintendo was involved in the filing of the Petition. Petitioner has asserted Nintendo did not exercise, nor could it have exercised, control over filing the Petition, nor did Nintendo have any involvement with this filing. Paper 11, 1–5. Petitioner supported its

⁷ Petitioner and the Declaration of Mr. Chang (Ex. 1014) refer to the agreement interchangeably as a common interest agreement and a common defense agreement. In this Decision, we refer to the agreement as the common defense agreement.

assertion with the Declaration of Mr. Chang, who declared that neither the manufacturing agreements nor the common defense agreements give Nintendo control over filing the Petition, and further that Nintendo did not fund or otherwise participate in this filing. Ex. 1014. Therefore, based on the current record, we are not persuaded that Petitioner failed to comply with the statutory requirement to identify all real parties-in-interest.

B. Identification of Related Matters

Patent Owner requests that we vacate the filing date of the Petition on grounds that Petitioner should have notified the Board of the *ex parte* reexamination, Reexamination Control No. 90/020,085, filed on May 13, 2015, because the request was “likely filed at the behest of PixArt and/or Nintendo.” Prelim. Resp. 2–6.

A petition for *inter partes* review must provide such information as the Director may require by regulation. 35 U.S.C. § 312(a)(4). The regulation raised by Patent Owner requires a petitioner to file a mandatory notice identifying any other judicial or administrative matter that would affect, or be affected by, a decision in the proceeding. 37 C.F.R. §§ 42.8(a)(1), 42.8(b)(2).

Patent Owner asserts the *ex parte* reexamination request involves one or more of the same claims involved in the Petition, and, therefore, is a related proceeding that could affect or be affected by this proceeding. Prelim. Resp. 6. Patent Owner, however, has not presented sufficient evidence that Petitioner was aware of or should have been aware of the *ex parte* reexamination request at the time the Petition was filed. *Id.* at 2–6. Patent Owner’s assertion that Petitioner knew of the *ex parte* reexamination, without more, amounts to speculation, and, therefore, is unpersuasive. On

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September 24, 2015, six days after the filing of Patent Owner's response identifying the reexamination proceeding, Petitioner filed an updated notice of related matters identifying the reexamination proceeding. Paper 9, 2. Therefore, based on the current record, we are not persuaded Petitioner failed to comply with the requirements of 37 C.F.R. § 42.8(b)(2).

C. Claim Construction

Consistent with the statute and the legislative history of the Leahy-Smith America Invents Act ("AIA"),⁸ the Board will interpret claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent. *See* 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1275–79 (Fed. Cir. 2015).

The parties each propose interpretations for the following claim terms of the '214 patent: "external cursor" (Pet. 8–9; Prelim. Resp. 31–33); and "filtering" (Pet. 10; Prelim. Resp. 33–34). The parties, furthermore, agree that the preamble of each independent claim of the '214 patent is limiting. Pet. 10; Prelim. Resp. 34–37. Although the parties disagree concerning their proposed constructions of the terms "external cursor" and "filtering," the parties do not raise any dispute based on claim interpretation as to whether the features identified in the prior art references that form the grounds of Petitioner's challenges satisfy these claim limitations. Furthermore, the parties do not raise any dispute based on whether the subject matter recited in the preambles of the challenged independent claims of the '214 patent is disclosed in the prior art. Accordingly, based on the current record and for the purposes of this Decision, we do not need to interpret the terms "external cursor" and "filtering," or determine whether the preambles are limiting.

⁸ Pub. L. No. 112–29, 125 Stat. 284 (2011).

D. Prosecution History of the '214 Patent

“[T]he prosecution history . . . is to be consulted even in determining a claim’s broadest reasonable interpretation.” *Straight Path IP Group, Inc. v. Sipnet EU S.R.O.*, No. 2015-1212, 2015 WL 7567492, at *6 (Fed. Cir. Nov. 25, 2015) (citing *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015)). During prosecution of the ’214 patent, claim 1 was amended to distinguish over Hauck⁹ as follows:

1. (Amended) A method for remotely controlling a computer having an associated screen for displaying output from the computer and having an internal cursor generated by the computer, the method comprising:

detecting at least one property of an external cursor and position of the external cursor relative to the [screen] output from the computer;

generating a command to move the internal cursor to a position on the screen corresponding to the position of the external cursor; and

generating a command for the computer based on the at least one detected property of the external cursor.

Ex. 1002, 56. To distinguish claim 1 over Hauck, Applicant for the ’214 patent argued Hauck requires a user to illuminate a menu choice or on screen button to control the computer, in contrast to the claimed invention, which “uses an external cursor having a plurality of properties (such as shape, movement, pattern, color, etc.) to remotely control the computer, and does not rely solely on cursor position (i.e. presence or absence of a cursor within a button) to control the computer.” *Id.* at 60.

⁹ U.S. Patent No. 5,515,079, issued May 7, 1996 (“Hauck”) (Ex. 1003).

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Applicant further argued claims 8, 9, and 18, *inter alia*, were distinguishable over Arita¹⁰ on grounds that Arita does not disclose using a pointer with “multiple selectable properties to control the computer,” and “[t]o the extent any control to the computer is provided, the control is based on the position of the cursor and not the characteristic or property of the cursor.” *Id.* at 61.

The Examiner noted, in the reasons for allowing claims 1, 4–20, 23, 25, and 26, that neither Hauck nor Arita, either alone or in combination, teaches or suggests:

a method for generating computer commands having a processor in communication with a camera for processing the image in order to detect the position and at least one property of the external optical cursor and convert that position and at least one property of said external optical cursor to corresponding commands to move an internal cursor to a position corresponding to the external optical cursor and control the computer based on detected at least one property of the external optical cursor.

Id. at 72.

E. Asserted Anticipation of Claims 1, 2, 4, 5, 8, 9, 17–19, and 24–26 Based on Stove

1. Overview of Stove

Stove is titled “Position Determination of a Laser Pointer in a Projection Display System,” and discloses a projection display system. Ex. 1005, 1:5. Stove discloses that the projection display system comprises:

[A] projector for projecting a computer generated display on to a screen, a pointer producing a narrow beam of radiation of higher intensity than the projected image, a video camera located in a fixed position relative to the projector and arranged

¹⁰ U.S. Patent No. 5,712,658, issued Jan. 27, 1998 (“Arita”) (Ex. 1004).

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to view the screen, and [a] means for analyzing the video signal produced by the camera to determine the point on the screen illuminated by the pointer.

Id. at 2:5–11. “By these means the computer is provided with information which enables it to determine where the pointer is pointed at on the screen.”

Id. at 2:12–13. Stove further discloses the presentation on the screen of soft buttons for controlling the computer, wherein the button is actuated when the radiation beam is maintained at a position on the button for a specified period of time. *Id.* at 2:23–28. “The computer then performs the appropriate operation in response to the simulated button pressing.” *Id.* at 2:28–29.

2. Analysis

Petitioner alleges claims 1, 2, 4, 5, 8, 9, 17–19, and 24–26 of the ’214 patent are anticipated by Stove. Pet. 11–21. In support of these asserted grounds of unpatentability, Petitioner provides its arguments and proffers a Declaration of Dr. M. Ray Mercer to support its contentions. *Id.*; Ex. 1010.

Petitioner argues that Stove discloses, as recited in claim 1, a method for remotely controlling a computer having an associated screen for displaying output from the computer and having an internal cursor generated by the computer (Pet. 13 (citing Ex. 1005, Abstract, 2:5–6, 3:2–3, 6:17–21, 10:17–18)); detecting at least one property of an external cursor and position of the external cursor relative to the output from the computer (Pet. 13–14 (citing Ex. 1005, 2:26–28, 6:8–9, 7:6–7, 7:13–15, 10:8–10)); generating a command to move the internal cursor to a position on the screen corresponding to the position of the external cursor (Pet. 14 (citing Ex. 1005, 10:15–18)); and generating a command for the computer based on the at

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least one detected property of the external cursor (Pet. 14 (citing Ex. 1005, 2:26–28)).

Patent Owner responds that Petitioner has not shown a reasonable likelihood Stove anticipates independent claims 1, 17, 19, 24, and 25 on grounds that Stove requires the selection of soft buttons in order to generate a computer command. Prelim. Resp. 38–40. Patent Owner argues Stove “falls squarely within the prior art references that were considered by the USPTO and distinguished by the applicant when the ’214 patent was issued that required a displayed command structure . . . of the type distinguished by the patentee with regard to the amended and issued independent claims of the ’214 patent.” *Id.* at 39–40. Although it was argued during prosecution of the ’214 patent that “Applicant’s invention provides greater flexibility of control through the use of a plurality of user selectable cursor properties or characteristics and does not require on-screen display of control buttons or a menu screen,” the language of the challenged claims does not preclude on-screen display of control buttons or a menu screen (Ex. 1002, 60), and the Examiner did not rely on this distinction in allowing the claims, but relied instead on a different distinction made by Applicant (Ex. 1002, 72). Thus, it is not clear that the disclaimer of an on-screen display of control buttons or menu screen is unambiguous as required in *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324(Fed.Cir.2003).

The challenged claims, however, do require detection of a property in addition to position, a point raised by Applicant in distinguishing Hauck and Arita (Ex. 1002, 60–61 (“Applicant’s invention as disclosed and claimed uses an external cursor having a plurality of properties (such as shape, movement pattern, color, etc.) to remotely control the computer, and does not rely

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solely on cursor position . . . to control the computer”)), and the Examiner allowed the claims on grounds that Hauck and Arita do not teach or suggest controlling the computer based on the additional detected property (*Id.* at 72). Petitioner alleges Stove discloses detecting at least one property in addition to position, namely the period of time a laser beam is pointed at the position of an onscreen button. Pet. 13 (quoting Ex. 1005, 2:26–28 (“by pointing the laser beam at the position of the button on the screen and maintaining it there for a given period of time may cause the button to be operated”), 7:6–7 (“to detect that the laser pointer has been pointing at a particular spot on the screen for greater than a given period of time”)). Petitioner further alleges Stove discloses generating a computer command based on detecting this additional property. *Id.* at 14 (quoting Ex. 1005, 10:15–18 (“This position is transformed into normalised absolute screen coordinates which is fed into the computer on which the presentation software is running. The mouse cursor follows the red light laser pointer on the screen [external cursor]”)).

Patent Owner further argues the position of the pointer (i.e., external cursor) in Stove is not intended to be detected by image processing. Prelim. Resp. 40. On this record, we do not find Patent Owner’s argument to be persuasive. Patent Owner does not identify claim language in the challenged claims that would require detecting external cursor position by image processing. We note claim 2, and claims 4, 5, 8, and 9 depending directly or indirectly therefrom, recite that the step of detecting comprises capturing an image of the screen and external cursor and processing the image to detect the at least one property of the external cursor. Claims 17–19 and 24 similarly recite capturing an image, and claim 26 recites processing an

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image. Petitioner alleges Stove discloses video camera 5 that views and captures the screen and external cursor. Pet. 14. Petitioner further alleges Stove discloses processing the video to detect the at least one property of the external cursor. *Id.* at 15.

We have reviewed Petitioner's analysis and supporting evidence regarding the proposed ground of anticipation based on Stove. On the record before us, we are persuaded that Petitioner has demonstrated a reasonable likelihood that independent claims 1, 17, 19, 24, 25, and 26 of the '214 patent are anticipated by Stove.

Based on the information presented, we are satisfied Petitioner is also reasonably likely to prevail in showing at trial that claims 2, 4, 5, 8, 9, and 18, which depend directly or indirectly from claims 1 or 17, are anticipated by Stove. Pet. 11–17.

Accordingly, we are persuaded, based on the current record, that Petitioner has established a reasonable likelihood it would prevail in showing that claims 1, 2, 4, 5, 8, 9, 17–19, and 24–26 of the '214 patent are anticipated by Stove.

*F. Asserted Anticipation of Claims 1–4, 6, 7, 9, 11, 17, 18, and 25
Based on Platzker*

1. Overview of Platzker

Platzker is titled “Interactive Projected Video Image Display System,” and discloses a system comprising a computer for generating video images, a projection apparatus for projecting computer-generated images onto a projection screen, and at least one video camera for visually recording the projected image. Ex. 1006, Abstract. Video input port 12*b* of computer 12 is coupled to video camera 28*a*, and includes a conventional frame grabber

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for grabbing frames of the projected image as recorded by video camera 28a.

Ex. 1006, 5:10–17. Platzker discloses that:

The computer 12 is programmed to compare the captured images with the original video image. Upon detection of certain recognized objects having a particular feature which are present in the captured image or upon detection of a recognizable pattern which has been formed by the combination of an introduced object and an existing feature contained in the projected image, a signal is generated to activate the computer to perform a specific instruction, such as for example, modify the video image, save a captured image to memory, etc.

Id. at 5:23–32. In detecting features or patterns, Platzker discloses computer 10:

[M]ay be programmed in accordance with more advanced image processing techniques, such as feature extraction or pattern correlation . . . [t]he computer may also be programmed to look for other special features such as profile, size, color, etc., or special movement of the introduced object, such as, for example, a hand movement corresponding to making a check mark.

Id. at 3:14–25. Detection of a particular feature, pattern, or movement caused computer 10 to perform certain tasks. For example, a user may “click” (i.e., select) a button projected on the screen by holding her hand over the button for a predetermined length of time. *Id.* at 3:3–12.

2. Analysis

Petitioner alleges claims 1–4, 6, 7, 9, 11, 17, 18, and 25 of the '214 patent are anticipated by Platzker. Pet. 21–30. In support of these asserted grounds of unpatentability, Petitioner provides its arguments and proffers a Declaration of Dr. Mercer to support its contentions. *Id.*; Ex. 1010.

Petitioner argues Platzker discloses, as recited in claim 1, a method for remotely controlling a computer having an associated screen for

displaying output from the computer and having an internal cursor generated by the computer (Pet. 22–23 (citing Ex. 1006, 2:27–31, 7:33–36)); detecting at least one property of an external cursor and position of the external cursor relative to the output from the computer (Pet. 23 (citing Ex. 1006, 3:14–25, 7:33–36, 8:60–65, 9:2–6)); generating a command to move the internal cursor to a position on the screen corresponding to the position of the external cursor (Pet. 23–24 (citing Ex. 1006, 7:33–36, 9:66–10:5)); and generating a command for the computer based on the at least one detected property of the external cursor (Pet. 24 (citing Ex. 1006, 3:3–12, 7:30–36)).

Patent Owner responds that Petitioner has not shown a reasonable likelihood Platzker anticipates the challenged claims on grounds that Platzker is cumulative of the prior art presented during prosecution of the '214 patent, and, therefore, does not anticipate independent claims 1, 17, and 25. In particular, Patent Owner argues “Platzker shows a system in which command generation is based upon the external pointer being directed either at a command button on a screen or at a given screen location for a specific period of time. Prelim. Resp. 42; *see also id.* at 41. Patent Owner argues:

[T]he applicant distinguished command generation that relied upon positioning the external cursor at any specific location relative to the computer output, regardless of whether the command trigger was a change in some optically measured property or characteristic of the external cursor or simply just measured time at location. Rather, the '214 patent enabled command generation via the use of gesture recognition (*i.e.*, a pattern of movement, such as rotation) that did not rely upon positioning the external cursor at any given location relative to the computer output in order to generate a command.

Prelim. Resp. 42. On this record, Patent Owner’s argument is not persuasive. For reasons we discussed above with respect to Stove, it is

sufficient at this stage of the proceeding that Petitioner alleges Platzker discloses detection of at least one property, in addition to position, of an external cursor, and generates a computer command based on the detection. Pet. 23–24, 27–30.

We have reviewed Petitioner’s analysis and supporting evidence regarding the proposed ground of anticipation based on Platzker. On the record before us, we are persuaded that Petitioner has demonstrated a reasonable likelihood that claims 1, 17, and 25 of the ’214 patent are anticipated by Platzker.

Based on the information presented, we are satisfied Petitioner is also reasonably likely to prevail in showing at trial that claims 2–4, 6, 7, 9, 11, and 18, which depend directly or indirectly from claims 1 and 17, are anticipated by Platzker. Pet. 21–29.

Accordingly, we are persuaded, based on the current record, that Petitioner has established a reasonable likelihood it would prevail in showing that claims 1–4, 6, 7, 9, 11, 17, 18, and 25 of the ’214 patent are anticipated by Platzker.

G. Asserted Anticipation of Claims 1, 2, 4–6, 8–10, 17–21, and 24–26 Based on Bronson

1. Overview of Bronson

Bronson is titled “Projected Image Light Pen,” and discloses a technique for interacting with a projected video image using a light pen on a projection screen in which light reflected from the projected image is compared with the video image to detect the position the light pen is pointing at on the projected image. Ex. 1007, Abstract. Bronson discloses that the system can differentiate between different users (i.e., who are holding different light pens) by detecting properties specific to the user’s

light pen, including “color, intensity, blink modulation or any other means detectable by video display sensor.” *Id.* at 4:5–26. With reference to the Figure of Bronson, the properties of the light beam may be selected by providing a switch on light pen 32. *Id.* at 4:5–11. Bronson further discloses that “[a]dditional buttons 38 could provide access on projected image light pen 32 to other display functions, such as zoom-in, zoom-out, pan, rotate, drag, etc.” *Id.* at 4:22–25.

2. Analysis

Petitioner alleges claims 1, 2, 4–6, 8–10, 17–21, and 24–26 of the ’214 patent are anticipated by Bronson. Pet. 30–43. In support of these asserted grounds of unpatentability, Petitioner provides its arguments and proffers a Declaration of Dr. Mercer to support its contentions. *Id.*; Ex. 1010.

Based on the current record and for the purposes of this Decision, with respect to at least one limitation of each of the independent challenged claims, Petitioner has not made a sufficient showing. In particular, Petitioner has not made a sufficient showing as to the following claim limitations: “generating a command for the computer based on the at least one detected property” (claim 1, Ex. 1001, 9:44–45); “converting the position and the at least one detected property to corresponding computer commands” (claim 17, *id.* at 10:54–55); “generating commands . . . to control functioning of the computer based on the at least one property of the optical cursor” (claim 19, *id.* at 11:4–8); “converting the position and at least one property to corresponding commands to control the computer” (claim 24, *id.* at 12:2–3); “instructions for generating a command for the computer based on the at least one detected property of the external cursor” (claim 25,

id. at 12:15–17); and “instructions for converting the position and the at least one property to a command to control the computer” (claim 26, *id.* at 12:30–31).

For claims 1, 17, 19, 25, and 26, Petitioner argues Bronson discloses that additional buttons 38 on light pen 32 “could provide access on projected image light pen 32 to other display functions, such as zoom-in, zoom-out, pan, rotate, drag, etc.” Pet. 33, 37–38, 42–43 (citing Ex. 1007, 4:19–25). Bronson discloses that the additional detected properties (i.e., color, intensity, blink modulation or any other means detectable) are selected in response to a switch, and, as pointed out by Patent Owner, are used to distinguish light pens (i.e., users), rather than to control the computer. Prelim. Resp. 44; *see also* Ex. 1007, 4:5–11. The additional buttons 38 relied on by Petitioner are described as providing access to display functions (Ex. 1007, 4:22–25), but Petitioner has not made a sufficient showing that actuating these buttons relates to switching the properties of the light pen such that additional properties will be detected and used to control the computer. Pet. 33, 37–38, 42–43.

As to the limitation of claim 24, “converting the position and at least one property to corresponding commands to control the computer,” Petitioner alleges Bronson “discloses positioning the internal cursor (*e.g.*, ‘cursor’) when the optical cursor (*e.g.*, spot projected from light pen 32) remains within the output displayed on the screen.” Pet. 40–41. Petitioner has not identified sufficiently what it alleges meets the “at least one property” limitation, or sufficiently explained how Bronson discloses converting the “at least one property” to a corresponding command to control the computer.

We have reviewed Petitioner's analysis and supporting evidence regarding the proposed ground of anticipation based on Bronson. We are not persuaded that Petitioner has demonstrated a reasonable likelihood that claims 1, 17, 19, and 24–26 of the '214 patent are anticipated by Bronson.

Furthermore, based on the information presented, we are not persuaded Petitioner is reasonably likely to prevail in showing at trial that claims 2, 4–6, 8–10, 18, 20, and 21, which depend directly or indirectly from claims 1 and 17, are anticipated by Bronson for the same reasons we are not persuaded Bronson anticipates claims 1 and 17. Pet. 30–40.

*H. Asserted Anticipation of Claims 1, 2, 4, 6, 8, 9, 11, 19, and 25
Based on Elrod*

1. Overview of Elrod

Elrod is titled "Position and function input system for a large area display," and discloses light pen 22 for projecting a light spot onto a viewing surface for indicating position of a location marker and for indicating a function to be performed. Ex. 1008, Abstract. Elrod discloses that light pen 22 projects a beam of infrared light (IR) onto the front surface of screen 20 at a location where the user desires to indicate an input. *Id.* at 3:18–20. Elrod further discloses three function selection buttons 42, 44, and 46 (front, middle, and rear) that are comparable to mouse buttons. *Id.* at 3:57–58. The output signal representative of each function (front, middle, and rear) is differentiated by frequency. *Id.* at 4:6–11. Lens 24 is used to focus light reflected off the viewing surface screen 20 on to a photodiode 28. *Id.* at 3:35–37.

2. *Analysis*

Petitioner alleges claims 1, 2, 4, 6, 8, 9, 11, 19, and 25 of the '214 patent are anticipated by Elrod. Pet. 43–50. In support of these asserted grounds of unpatentability, Petitioner provides its arguments and proffers a Declaration of Dr. Mercer to support its contentions. *Id.*; Ex. 1010.

Petitioner argues Elrod discloses, as recited in claim 1, a method for remotely controlling a computer having an associated screen for displaying output from the computer and having an internal cursor generated by the computer (Pet. 44 (citing Ex. 1008, 2:5–7, 2:24–26, 3:33–43, 6:31–33)); detecting at least one property of an external cursor and position of the external cursor relative to the output from the computer (Pet. 44–45 (citing Ex. 1008, 2:48–53, 3:57–58, 4:9–11)); generating a command to move the internal cursor to a position on the screen corresponding to the position of the external cursor (Pet. 45 (citing Ex. 1008, 2:26–27, 4:8–9)); and generating a command for the computer based on the at least one detected property of the external cursor (Pet. 45–46 (citing Ex. 1008, 2:50–53, 4:11–12, 4:44–45)).

Patent Owner responds that Petitioner has not shown a reasonable likelihood Elrod anticipates the challenged claims on grounds that Elrod “does not add to the prior art already considered by the USPTO and distinguished by the applicant, and does not anticipate independent claims 1, 19 and 25” at least because “it requires the user to interact with functional information displayed such as window or menu items on the screen in order to remotely generate commands using the varying pulse frequency of the light spot.” Prelim. Resp. 47 (citing Ex. 1008, 3:22–24, 4:11–12, 4:44–45) (emphasis removed). In particular, Patent Owner argues that in Elrod “there

is no example given in which detected frequency changes generate a function that does not also require the pointer to be pointed at some functional structure on the screen, such a[s] clicking on a button.” Prelim. Resp. 46. On this record, Patent Owner’s argument is not persuasive. For reasons we discussed above with respect to Stove, it is sufficient at this stage of the proceeding that Petitioner alleges Elrod discloses detection of at least one property (i.e., different frequencies that uniquely identify a function to be performed), in addition to position, of an external cursor, and generates a computer command based on the detection. Pet. 44–45, 48–50.

Patent Owner further argues that the frequency changes detected in Elrod “are not detected by image processing but rather by signal processing.” Prelim. Resp. 46. In particular, Patent Owner argues “in Elrod, a specialized photodiode is used to detect the frequency changes via signal processing,” and “[t]he photodiode system does not perform image processing to capture and the compare images in order to detect the changing external cursor properties.” *Id.* at 46–47. On this record, Patent Owner’s argument is not persuasive. Patent Owner does not identify claim language in the challenged claims that would require performing image processing to capture and compare images to detect external cursor properties. We note claim 2, and claims 4, 6, 8, 9, and 11 depending directly or indirectly therefrom, recite that the step of detecting comprises capturing an image of the screen and external cursor and processing the image to detect the at least one property of the external cursor. Claim 19 similarly recites capturing an image. Petitioner alleges lens 24, filter 26, and photodiode 28 disclosed in Elrod perform the same function as a camera, and, that photodiode 28 captures an image of screen 20 and external cursor

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22. Pet. 46 (citing Ex. 1008, Fig. 1, 2:32–33). We further note that, whereas independent claims 2 and 19 recite capturing an image, and generating commands based on the captured image, these claims do not include language that precludes the methods disclosed in Elrod (i.e., bandpass filtering (Ex. 1008, 4:13–15)) for determining frequency as a property of the external cursor.

We have reviewed Petitioner’s analysis and supporting evidence regarding the proposed ground of anticipation based on Elrod. On the record before us, we are persuaded that Petitioner has demonstrated a reasonable likelihood that independent claims 1, 19, and 25 of the ’214 patent are anticipated by Elrod.

Based on the information presented, we are satisfied Petitioner is also reasonably likely to prevail in showing claims 2, 4, 6, 8, 9, and 11, which depend directly or indirectly from claim 1, is also anticipated by Elrod. Pet. 43–48.

Accordingly, we are persuaded, based on the current record, that Petitioner has established a reasonable likelihood it would prevail in showing that claims 1, 2, 4, 6, 8, 9, 11, 19, and 25 of the ’214 patent are anticipated by Elrod.

I. Asserted Anticipation of Claims 1, 2, 4, 7–9, 19, and 25 Based on Vogeley

1. Overview of Vogeley

Vogeley is titled “Method and Apparatus for Interacting with a Computer Generated Projected Image,” and discloses an operator-controlled radiation projector for projecting a beam of radiation on an image created by a computer-controlled image projection system, and determining the position

of the radiation relative to the projected image. Ex. 1009, Abstract. Vogeley further discloses that the radiation is detected by sensor means 14 that is “either analog (area diode, vidicon tube, etc.) or digital (charge coupled diode (CCD), area or linear) in nature” (*id.* at 3:35–37), and in an embodiment, is made of a “charge coupled diode (CCD) type sensor, such as those found in portable video cameras” (*id.* at 5:25–28). Vogeley also discloses that the radiation could be a point or small ball of light, or any desired symbol including a circle, rectangle, etc., and in an embodiment, the radiation is of a particular geometric shape such that movement of the shape over a portion of the computer-controlled image projected on the screen is erased. *Id.* at 10:11–17.

2. *Analysis*

Petitioner alleges claims 1, 2, 4, 7–9, 19, and 25 of the ’214 patent are anticipated by Vogeley. Pet. 50–56. In support of these asserted grounds of unpatentability, Petitioner provides its arguments and proffers a Declaration of Dr. Mercer to support its contentions. *Id.*; Ex. 1010.

Petitioner argues Vogeley discloses, as recited in claim 1, a method for remotely controlling a computer having an associated screen for displaying output from the computer and having an internal cursor generated by the computer (Pet. 51 (citing Ex. 1009, 2:24–29, 3:51–4:2, 4:4–6, 10:63–11:10)); detecting at least one property of an external cursor and position of the external cursor relative to the output from the computer (Pet. 52 (citing Ex. 1009, 2:41–46, 3:42–45, 3:60–62, 6:39–41, 9:57–66, 10:11–17)); generating a command to move the internal cursor to a position on the screen corresponding to the position of the external cursor (Pet. 52 (citing Ex. 1009, 3:63–65)); and generating a command for the computer based on the at least

one detected property of the external cursor (Pet. 52 (citing Ex. 1009, 10:11–17)).

Patent Owner responds that Petitioner has not shown a reasonable likelihood Vogeley anticipates the challenged claims on grounds that Vogeley “does not add to the prior art distinguished by the applicant and does not anticipate independent claims 1, 19 and 25” at least because “it still requires the user to pulse a specific location at a specific frequency in order to remotely generate a computer command.” Prelim. Resp. 49–50 (emphasis removed). In particular, Patent Owner argues that “Vogeley only uses the ‘existence or non-existence of operator-controlled radiation at an appropriate position on the image area’ to generate a command,” and “this is simply envisioning a way to remotely select or activate a displayed command structure, such as a Windows type menu.” *Id.* at 48–49 (emphasis removed). For reasons we discussed above with respect to Stove, it is sufficient at this stage of the proceeding that Petitioner alleges Vogeley discloses detection of at least one property (i.e., a given geometric shape), in addition to position, of an external cursor, and generates a computer command based on the detection. Pet. 52, 55–56.

Patent Owner further argues that “Vogeley uses reflected indirect-detection of position via a photosensor and pulse-code analog detection,” and “Vogeley enables the system through the use of a ‘position sensing diode’ which produces a continuous analog output” Prelim. Resp. 48–49 (citing Ex. 1009, 3:43–50, 7:30–45). On this record, Patent Owner’s argument is not persuasive.

First, Patent Owner refers to an embodiment in which sensor means 14 is a position sensing diode, and argues sensor means 14 produces

an analog output (Prelim. Resp. 49 (citing Ex. 1009, 7:30–45)); however, Vogeley discloses alternative embodiments for sensor means 14, i.e., a digital embodiment including a charge coupled device or charge coupled diode such as those found in portable video cameras. (Ex. 1009, 3:35–37, 5:25–28).

Second, Patent Owner does not identify claim language in the challenged claims that precludes detection by a photo sensing diode that produces analog output. We note claim 2, and claims 4 and 7–9 depending directly or indirectly therefrom, recite that the step of detecting comprises capturing an image of the screen and external cursor and processing the image to detect the at least one property of the external cursor. Claim 19 similarly recites capturing an image. Petitioner alleges the external cursor is captured by sensor means 14, and cites Vogeley’s disclosure that sensor means 14 “may be any form of photosensor capable of outputting a signal for processing and interpretation to define the radiation position on the focused image area.” Pet. 53 (citing Ex. 1009, 3:28–34, 4:32–35). Petitioner’s reasoning is sufficient at this stage of the proceeding.

We have reviewed Petitioner’s analysis and supporting evidence regarding the proposed ground of anticipation based on Vogeley. On the record before us, we are persuaded that Petitioner has demonstrated a reasonable likelihood that independent claims 1, 19, and 25 of the ’214 patent are anticipated by Vogeley.

Based on the information presented, we are satisfied Petitioner is also reasonably likely to prevail in showing claims 2, 4, and 7–9, which depend directly or indirectly from claim 1, are also anticipated by Vogeley. Pet. 50–54.

Accordingly, we are persuaded, based on the current record, that Petitioner has established a reasonable likelihood it would prevail in showing that claims 1, 2, 4, 7–9, 19, and 25 of the '214 patent are anticipated by Vogeley.

J. Asserted Obviousness of Claims 3, 7, 10, 11, 20, and 21 Based on Various Combinations of Stove, Platzker, Bronson, Elrod, Vogeley, and the Knowledge of a Person of Ordinary Skill in the Art

Petitioner puts forth several alleged grounds of unpatentability based on combinations of Stove, Platzker, Bronson, Elrod, Vogeley, and the knowledge of a person of ordinary skill in the art. Pet. 56–60. Petitioner's assertions of obviousness, as pointed out by Patent Owner (Prelim. Resp. 50–55), are conclusory, and do not provide sufficient reasoning for the alleged combinations. Pet. 56–60. A determination of obviousness requires "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l. Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). For example, Petitioner acknowledges none of Stove, Bronson, and Elrod teach or suggest filtering an image to detect the shape of the external cursor, as required by claim 7. Pet. 58. Petitioner argues, however, that each of Platzker and Vogeley disclose filtering the recited feature, and asserts that "[i]t would have been obvious to replace the image processing arrangement of Stove, Bronson, or Elrod with the one described by Platzker or Vogeley as a simple substitution of one known element for another to obtain predictable results." *Id.* Petitioner does not provide sufficient reasoning, however, as to why a skilled artisan would have applied shape detection techniques to Stove, which Petitioner alleges teaches detecting a period of time an external cursor is held over a button (Pet. 13). Similarly, Petitioner

does not provide sufficient reasoning as to why a skilled artisan would have arrived at the other combinations alleged by Petitioner.

We have reviewed Petitioner's analysis and supporting evidence regarding the proposed ground of obviousness of claims 3, 7, 10, 11, 20, and 21. Pet. 56–60; Ex. 1010. On the record before us, we are not persuaded that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that these claims of the '214 patent would have been obvious.

III. SUMMARY

For the foregoing reasons, we are persuaded that the information presented in the Petition establishes that there is a reasonable likelihood Petitioner would prevail with respect to claims 1–9, 11, 17–19, and 24–26 of the '214 patent. At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim.

IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314, an *inter partes* review is hereby instituted as to the challenged claims of the '214 patent on the following grounds:

1. Claims 1, 2, 4, 5, 8, 9, 17–19, and 24–26 of the '214 patent under 35 U.S.C. § 102(b) as anticipated by Stove;
2. Claims 1–4, 6, 7, 9, 11, 17, 18, and 25 of the '214 patent under 35 U.S.C. § 102(b) as anticipated by Platzker;
3. Claims 1, 2, 4, 6, 8, 9, 11, 19, and 25 of the '214 patent under 35 U.S.C. § 102(b) as anticipated by Elrod; and

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4. Claims 1, 2, 4, 7–9, 19, and 25 of the '214 patent under
35 U.S.C. § 102(b) as anticipated by Vogeley;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37
C.F.R. § 42.4, notice is hereby given of the institution of a trial, the trial
commencing on the entry date of this decision; and

FURTHER ORDERED that no other ground of unpatentability
alleged in the Petition for any claim is authorized for this *inter partes*
review.

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